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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,537	10/30/2001	Su Yi Liu	WIN/121/US	5688

7590 06/03/2004

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Hartford, CT 06103-2721

EXAMINER

LUDLOW, JAN M

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/003,537

Applicant(s)

LIU ET AL.

Examiner

Jan M. Ludlow

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Gilson et al.

Gilson teaches a pipette having a piston seal 16 as claimed formed by a soft and flexible plastic seal 86, 90, 92, seat 82, 88 and resilient o-ring 92 as shown in Figures 2 and 4. The o-ring is compressed by spring 80 to force the seal into engagement with the piston. See col. 4, lines 27-54. It is the examiner's position that given the fit of the parts shown in the figures, the o-ring inherently presses outwardly on the seat portion adjacent the pipette body wall.

3. Claims 3-4, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilson as applied to claims 1-2, 5 above, and further in view of Sattler.

Gilson fails to teach that the o-ring is made of rubber, or that the seal is made of UHMWPE.

Sattler teaches a piston and cylinder dispenser. Polyethylene is recognized as having sealing ability (col. 4, lines 1-5) and rubber is recognized as a suitable o-ring material. Note that Sattler teaches polyethylene as an alternative to Teflon.

It would have been obvious to make the seal of Gilson of polyethylene in order to provide a good surface to surface sliding seal in a dispenser as taught by Sattler. With

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respect to the molecular weight, it would have been obvious to use any form of polyethylene exhibiting the desired characteristics of Gilson and/or Sattler. It would have been obvious to use a rubber o-ring for its known deformation properties and in order to use a known o-ring material suitable for use in sliding piston dispensers as taught by Sattler.

4. Claims 3-4, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilson as applied to claims 1-2, 5 above, and further in view of Clark et al.

Gilson fails to teach that the o-ring is made of rubber, or that the seal is made of UHMWPE.

Clark teaches a piston and cylinder dispenser. A seal made of a polyethylene ring and o-ring combination is taught (col. 43, lines 55-65).

It would have been obvious to make the seal of Gilson of a polyethylene ring with o-ring in order to provide a sliding seal in a dispenser as taught by Clark. With respect to the molecular weight, it would have been obvious to use any form of polyethylene exhibiting the desired characteristics of Gilson and/or Clark. It would have been obvious to use a rubber o-ring for its known deformation properties and in order to use a known o-ring material as was known in the art.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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6. Oshikubo additionally teaches a pipette having a piston seal as claimed formed by seal 5, seat 6 and o-ring 4 as shown in Figure 3. See col. 3, lines 48-49, col. 5, lines 26-30, 45.

Additionally teaches a polyethylene wear ring and o-ring seal

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday-Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jan M. Ludlow  
Primary Examiner  
Art Unit 1743

Jml  
May 29, 2004